

Office Action Summary

Application No. 09/822,025	Applicant(s) Takushi Yuzawa et al
Examiner M. L. Progett	Group Art Unit 1762

—Th MAILING DATE of this communication appears on the cover sheet beneath th correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☐ Responsive to communication(s) filed on 11/14/01
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-4 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-4 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 2
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

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1. Claims 1-4 are objected to or rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2 and 4 contain the trademark/tradename turcite. Where a trademark or tradename is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or tradename cannot be used properly to identify any particular material or product. A trademark or tradename is used to identify a source of goods, and not the goods themselves. Thus, a trademark or tradename does not identify or describe the goods associated with the trademark or tradename. In the present case, the trademark/tradename is used to identify/describe a material of C and F used in an electrode and, accordingly, the identification/description is indefinite.

The examiner notes that the according to definition found in other patent references (Tidewell or Pleschet), Turcite is a variety of PTFE (polytetrafluoroethylene), and is a low-friction, self-lubricating material, not merely any old compound C and F.

In claim 1, on line 3 "an electric discharge" is objected to as using the wrong article for a limitation previously introduced in line 1. Also, in claims 1 and 4, does "no carbon components" mean no elemental C, or does it include carbon that maybe bound in compounds, such a liquids like kerosene?

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Claim 4 is vague indefinite and confusing, because the alternative statement in the last line is confusing and unclear. Exactly what is it alternatively to? It appears to be "a powder compressed electrode...fluorine" which is the alternative, and will be so treated. More significantly, "these" is not a proper article for showing antecedent basis, and the only previously introduced "components" is the "no carbon components" in lines 2-3, which make absolutely no sense as written. If the list of powders from lines 4-5 contains the intended choices, it is noted that the disulfide compounds, the boron nitride, the carbon and the "Turcite" (i.e. PTFE) are not metals, thus the intent would be further unclear or confusing.

2. With respect to the article claim, it is noted that "for discharge surface treatment... in a working liquid...no carbon components" is only intended use, but not part of the electrode, so the electrode only needs to be capable of such use, but need never be so employed. Considering the above 112 problems, as written claim 4 will read on any metal electrode that maybe used in a discharge process.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claim 4 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Saito et al (PEJ 9-19829A).

Note the partial translation of Saito et al (829) discloses a metal electrode, used in an electrical discharge process employing a fluid, thus reading on claimed electrode structure and capability.

5. Claim 4 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kiyoshi Inoue (JP 54-104,095), or Tsugumichi Kouno (JP 56-15938 A), or Inoue Japakkusa Kenkyujyo (JP 51-97099A), or Yoshiaki Sekiguchi (JP 55-48538).

In the Kiyoshi Inoue patent, note the abstract's teaching of an electrospark machining electrode made from powder mixtures of graphite (5-30% C) + a metal powder such as Sn (0.5-5%) with the remainder Cu or Ag, thus teaching a metal electrode that may be all or partly made of what this application defines as solid lubricants.

The Inoue (099A) patent's particle translation teaches and electric discharge machining electrode made of metal, such as Fe or Cu or Ag or Cu-W, plus graphite particles, hence can be said to read on a metal electrode which also comprises the component carbon, if component is intended to refer to the Markush group in claim 4.

The Yoshiaki Sekiguchi patent, as described in its English abstract, reads on an electrospark machining (i.e. electric discharge) electrode made of metals, such as W or Mo, and infiltrated with Cu or Ag, hence reads on metal electrodes, and maybe all or partly made of solid lubricant materials.

The patent to Tsugumichi Kouno discusses the roll (i.e. electrode) for an electrospark machining method, where the components of the electrode are as listed all metal, such that the

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main component maybe Ag (or Cu or Al), with addition of Mo or Cr or Ti or V or W, thus also teaching solid lubricant materials in the roll (electrode).

The electrodes in the patents are all capable of being used in the conditions claimed. Full translations of all applied foreign (Japanese) references are being ordered, but are not yet received.

6. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al (JP 05148615) in view of Urushiro et al (JP 06182626 A) or vise versa, and further in view of Inoue (095) or Inoue J.K. (099A) or Yoshiaki or Tsugumichi as applied in section 5.

Both the Saito et al (615) and Urushiro et al patents are concerned with electric discharge machining processes that may be done in liquids, and deposit coatings (see English abstracts and Figures 1). Their apparatus figures (#1) both show an electrode opposite a work-piece in a fluid. Urushiro et al particularly notes that the process involves an electric pulse, while Saito et al is silent on this topic. It would have been obvious to use pulsed discharge in Saito et al, as suggested by Urushiro et al teachings, as it is shown to be a known process; Saito et al's figure appears to show the use of a capacitor in the discharge circuit suggesting pulsing due to the electrical circuit; and pulsing helps minimize over heating which is an advantageous result.

Saito et al (615) teach use of the fluids oil or water (H_2O has no C), while Urushiro et al only generically teaches liquid, gas or vacuum, hence it would have been obvious to use specific liquids as taught in Saito et al, in the process of Urushiro et al when employing the liquid option as the generic suggestion of liquid would indicate to one of ordinary skill in the art to pick liquids known for the taught purpose; as they have been shown to be effective in analogous

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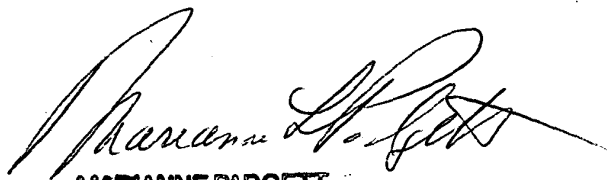
processing; and as one would choose one, such as H₂O, according to its effect (or non-effect) on the desired end product and source materials.

Both Saito et al (615) and Urushiro et al teach that a metal or metal alloy layer may be deposited by their machining electrode with Saito et al specifying it should be corrosion resistant, but neither English abstract provides information on specific metals deposited. It would have been obvious to one of ordinary skill the art, that the electrodes of Inoue (095 or 099A) or Yoshiaki or Tsugumichi, would have been effective for use in the combination of Saito et al and Urushiro et al, because they are all consumable electric discharge electrodes, thus intended to be used in electric discharge processing. Furthermore, metals such as silver are known to be generally more corrosion resistant under atmospheric condition, etc., hence are suggestive form Saito et al's teachings.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. L. Padgett whose telephone number is (703) 308-2333. The examiner can normally be reached on Monday-Friday from about 8:00 am-4:30 pm.

The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9310 for regular communications and 703-872-9311 for After Final communications and 703-305-6078 for unofficial communications.

Examiner Padgett/ng
October 22, 2002



MARIANNE PADGETT
PRIMARY EXAMINER

p.s. Translations for JP 06182626A & JP 05148615 have now arrived and are enclosed for applicant's convenience, but have not yet been reviewed by the examiner.

November 4, 2002



A DOCPHOENIX

APPL PARTS

IMIS
Internal Misc. Paper
LET.
Misc. Incoming Letter

371P
PCT Papers in a 371 Application

A...
Amendment Including Elections

ABST
Abstract

ADS
Application Data Sheet

AF/D
Affidavit or Exhibit Received

APPENDIX
Appendix

ARTIFACT
Artifact

BIB
Bib Data Sheet

CLM
Claim

COMPUTER
Computer Program Listing

CRFL
All CRF Papers for Backfile

DIST
Terminal Disclaimer Filed

DRW
Drawings

FOR
Foreign Reference

FRPR
Foreign Priority Papers

IDS
IDS Including 1449

NPL
Non-Patent Literature

OATH
Oath or Declaration

PET.
Petition

RETMAIL
Mail Returned by USPS

SEQLIST
Sequence Listing

SPEC
Specification

SPEC NO
Specification Not in English

TRNA
Transmittal New Application

CTNF
Count Non-Final

CTRS
Count Restriction

EXIN
Examiner Interview

M903
DO/EO Acceptance

M905
DO/EO Missing Requirement

NFDR
Formal Drawing Required

NOA
Notice of Allowance

PETDEC
Petition Decision

OUTGOING

CTMS
Misc. Office Action

1449
Signed 1449

892
892

ABN
Abandonment

APDEC
Board of Appeals Decision

APEA
Examiner Answer

CTAV
Count Advisory Action

CTEQ
Count Ex parte Quayle

CTFR
Count Final Rejection

INCOMING

AP.B
Appeal Brief

C.AD
Change of Address

N/AP
Notice of Appeal

PA..
Change in Power of Attorney

REM
Applicant Remarks in Amendment

XT/
Extension of Time filed separate

BACKFILE DOCUMENT INDEX SHEET

Internal

SRNT
Examiner Search Notes

CLMPTO
PTO Prepared Complete Claim Set

ECBOX
Evidence Copy Box Identification

WCLM
Claim Worksheet

WFEE
Fee Worksheet

File Wrapper

FWCLM
File Wrapper Claim

IIFW
File Wrapper Issue Information

SRFW
File Wrapper Search Info